Faculty of Economic, Social and Political Sciences

ECON2243   Game and Information Theory

[30h] 4 credits

This course is taught in the 1st semester

Teacher(s):   Hylke Vandenbussche
Language: French
Level: Second cycle

Aims

During the course, students will learn about the concepts of the theory of taught games, and will be able to apply them to the economic problems to which they are relevant as tools for analysis and formalisation.

Main themes

The course includes an introduction to game and information theory. The accent is on the theory of non-cooperative games, and the aim will be to show how this theory studies agents' strategic behaviour. Mathematical methods of game theory will be presented, and illustrated by applications drawn from economics, management and political sciences.
The course does not require a high standard of mathematics, but does call for a degree of interest in formalisation.

Content and teaching methods

The course covers the whole of the theory of non-cooperative games with complete and incomplete information. There will also be a brief introduction to the theory of cooperative games at the end of the course. Economic applications dealt with in the course include the theory of oligopoly, bargaining theory and auction theory.
The course consists of lectures and sessions involving exercises

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Two-year degree course in Economic Sciences.
Written or oral examination.
Reading lists will be provided at the beginning of the course.

Other credits in programs

ECGE3DS/EF	Diplôme d'études spécialisées en économie et gestion (Master in business administration) (économie financière)	(5 credits)	
ECGE3DS/SC	Diplôme d'études spécialisées en économie et gestion (Master in business administration) (Supply Chain Management)	(4 credits)	Mandatory
MAP22	Deuxième année du programme conduisant au grade d'ingénieur civil en mathématiques appliquées	(3 credits)	
MAP23	Troisième année du programme conduisant au grade d'ingénieur civil en mathématiques appliquées	(3 credits)	
MATH22/E	Deuxième licence en sciences mathématiques (Economie mathématique)	(4 credits)	Mandatory